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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/251,988	02/17/1999	BRIAN SAMUEL BEAMAN	Y0998-088	3930

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IBM CORPORATION  
INTELLECTUAL PROPERTY LAW DEPT  
P O BOX 218  
YORKTOWN HEIGHTS, NY 10598

EXAMINER
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HOLLINGTON, JERMELE M

ART UNIT	PAPER NUMBER
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2829

MAIL DATE	DELIVERY MODE
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/251,988	<b>Applicant(s)</b> BEAMAN ET AL.	
	<b>Examiner</b> Jermele M. Hollington	<b>Art Unit</b> 2829	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7, 10, 41-43, 49, 51, 58-60 and 64-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7, 10, 41-43, 49, 51, 58-60 and 64-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The indicated allowability of claims 7, 10, 41-43, 49, 51, 58-60, 64-68 is withdrawn in view of the newly discovered reference(s) to Harmon (3445770). Rejections based on the newly cited reference(s) follow.

### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: free ends, elongated spring contact elements, interconnection substrate [all in claim 69].

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 69 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 69, the limitation “elongated spring contact elements” was not described in the specification. In reviewing the specification and drawing, Fig. 28 describes wires 198. There is no description given that the wires 198 could be spring contact.

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For examination purposes, the examiner is not given weight to the word "spring" in the claim since wires 198 or any other wire given in the specification is a spring.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 7, 10, 41-43, 49, 51, 58-60, and 64-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Harmon (3445770).

Regarding claim 41, Harmon discloses a method [see all Figs.] comprising: providing a substrate (probe board 10) having a surface (surface 15); forming a plurality of elongated electrical conductors (probes 90-113) extending away from said surface (15); each of said elongated electrical conductors (90-113) having a first end [shown but not numbered] affixed to said surface (15) [via conductor strips 20-43 see col. 2, lines 26-30] and a second end [known in the prior art as "free end"] projecting away from said surface (15) [see Abstract and col. 2, lines 33-40]; there being a plurality of said second ends (free ends); providing a means for maintaining (insulating sheet 50) said plurality of said second ends (free ends) in substantially fixed positions with respect to each other [see Abstract and col. 2, lines 33-44].

Regarding claim 49, Harmon discloses means for maintaining (50) comprising a sheet of material (insulating sheet) having a plurality of opening (openings 51 and 60-83).

Regarding claim 7, Harmon discloses said sheet of material (50) is spaced apart from said surface (15) by a flexible support (base 11).

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Regarding claim 10, Harmon discloses said sheet (50) and said flexible support (11) forms a space containing said plurality of elongated electrical conductors (90-113).

Regarding claim 42, Harmon discloses said sheet (50) is formed and material selected from the group consisting of Invar, Cu/Invar/Cu, molybdenum, and polyimides [see col. 2, lines 4-7].

Regarding claim 43, Harmon discloses said sheet (50) is formed from a material selected from the group consisting of a metal, a polymer, a semiconductor and dielectric [see col. 2, lines 4-7].

Regarding claim 51, Harmon discloses said means for maintaining (50) comprises openings comprising a large region (51) and a small region (61-83) [see col. 2, lines 16-20], said compliant elongated electrical conductors (90-113) are first inserted through said large region (51) and then moved to said small region (61-83).

Regarding claim 58, Harmon discloses said means for maintaining (50) is a sheet of material comprising a plurality of openings (61-83) through which said second ends (free ends) project [see Abstract].

Regarding claim 59, Harmon discloses said means for maintaining (50) comprises at least one sheet of material comprising a plurality of openings (61-83) through which said second ends (free ends) project [see Abstract].

Regarding claim 60, Harmon discloses of said at least one sheet (50) is a sheet of electrically conductive material which has a top surface and a bottom surface and said openings (51 and 61-83) have a sidewall, a dielectric material coats said top surface and said bottom surface and said sidewall.

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Regarding claim 64, Harmon discloses each of said elongated electrical conductors (90-113) projects through one of said openings (51 and 61-83) in said sheet of material (50).

Regarding claims 65-66, Harmon discloses each of said elongated electrical conductors (90-113) projects through one of said openings (51 and 61-83) in said sheet of material (50).

Regarding claim 67, Harmon discloses said means for maintaining (50) comprises openings (51 and 61-83) which are larger in size than said compliant elongated electrical conductors (90-113) and wherein each of said elongated electrical conductors (90-113) projects through on of said openings (51 and 61-83) in said sheet of material (50).

Regarding claim 68, Harmon discloses each of said plurality of openings (51 and 61-83) is larger in size than said compliant elongated electrical conductors (90-113).

Regarding claim 69, Harmon discloses [see all Figs.] a method of effecting temporary connections to free ends (known in the prior art as free ends) of at least a portion of a plurality of elongate contact elements (probes 90-113) mounted to and extending from an electronic component (probe board 10) such as a semiconductor device, the method comprising: urging the electronic component (10) against an interconnection substrate [not shown] so that the free ends (free ends) of at least a portion of the contact elements (90-113) vertically contact selected ones of a corresponding plurality of terminals on the interconnection substrate [see col.1, lines 25-43]; providing a rigid planar member (insulating sheet 50) between the electronic component (10) and the interconnection substrate [not shown]; providing a plurality of guide holes (openings 51 and 60-83) in the rigid planar member (50); and inserting the free ends (free ends) of at least a portion of the contact elements (90-113) extending through selected ones of the guide holes (51 and 60-83) [see abstract and col. 2, lines 26-44].

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***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:00 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on (571) 272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jermele M. Hollington/  
Primary Examiner  
Art Unit 2829

/J. M. H./  
March 22, 2010

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